

## 3.1 Introduction to Environmental Analysis

This section provides an overview of the environmental analysis and presents the format for the environmental analysis in each topical section.

### 3.1.1 Environmental Topics Included in the Analysis

The Tier 1/Program EIS/EIR evaluation addresses broad questions and likely environmental effects within the Tier 1/Program EIS/EIR Study Area including, but not limited to, evaluation of the type of services being proposed and identification of major infrastructure components based on conceptual engineering and rail operations simulation conducted as part of the SDP process. The Tier 1/Program EIS/EIR, along with the concurrent preparation of the SDP, are the first steps in the tiered environmental review process. The Tier 1/Program EIS/EIR provides a service-level evaluation<sup>1</sup> and identifies areas of effect and resources that could be affected within the context of a resource specific study area. Chapter 3, Environmental Analysis, Consequences, and Mitigation, provides an analysis of the potential effects of the proposed Program. Sections 3.2 through 3.16 discuss the environmental effects that may result with approval and implementation of the proposed Program, and where potential effects are identified, present potential Tier-1/Program-level mitigation strategies to avoid or reduce those effects under a Tier 2/Project-level analysis (Section 1.2, Intended Uses of the Tier 1/Program EIS/EIR).

The following environmental resource area sections are included in Chapter 3:

- NEPA and CEQA analysis:
  - 3.2, Land Use and Planning (including agricultural and forestry resources)
  - 3.3, Transportation
  - 3.4, Visual Quality and Aesthetics
  - 3.5, Air Quality and Greenhouse Gases
  - 3.6, Noise and Vibration
  - 3.7, Jurisdictional Waters and Wetland Resources
  - 3.8, Biological Resources
  - 3.9, Floodplains, Hydrology, and Water Quality (including watersheds)

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<sup>1</sup> A service-level evaluation examines a conceptual level of design without a specific track alignment or station site. For purposes of this Tier 1/Program EIS/EIR, the service-level evaluation is needed as the route of the future passenger rail system must first be considered in its regional context, as it would influence roadway networks, future planning processes, and environmental issues spanning portions of three counties, numerous jurisdictions, and multiple independent planning processes. Site-specific effects and impacts would be analyzed during the Tier 2/Project-level process after design details are known.

- 3.10, Geology, Soils, Seismicity, and Paleontological Resources (including mineral resources)
- 3.11, Hazards and Hazardous Materials
- 3.12, Public Utilities and Energy
- 3.13, Cultural Resources
- 3.14, Parklands and Community Services
- NEPA analysis:
  - 3.15, Safety and Security
  - 3.16, Socioeconomics and Communities Affected

Section 3.17 provides the analysis of cumulative effects based on the Tier 1/Program EIS/EIR findings and potential effects identified in the preceding sections in Chapter 3. Chapter 4 includes an evaluation of potential environmental justice effects, and Chapter 5 includes the Section 4(f)/6(f) discussion. Chapter 6 discusses other CEQA statutory considerations, Chapter 7 is the evaluation of alternatives, and Chapter 8 includes public and agency outreach efforts.

### 3.1.2 Environmental Topics Not Included in the Evaluation

Environmental resource areas not included in this Tier 1/Program EIS/EIR evaluation include the following:

- NEPA:
  - Coastal zone management: The Program Corridor is not located within a coastal zone; therefore, it would not be subject to the Coastal Zone Management Act.

### 3.1.3 Format and Content Used in the Evaluation

For each environmental issue area considered in Chapter 3, the basic format and content for the environmental evaluation is as follows:

**Introduction:** This section provides a brief summary of the environmental resource area to be analyzed.

**Regulatory Framework:** This discussion describes the regulatory context of the environmental resource area being analyzed, including federal, state, regional, and local regulations, policies, and laws relevant to the Program.

**Methods for Evaluating Environmental Effects:** This discussion describes the methodology and/or assumptions used to characterize existing environmental conditions and evaluate the potential for effects on the existing human and natural environment during construction and

operation of the Program. Information includes data sources used and related environmental issue areas.

**Affected Environment:** This discussion provides a description of the existing physical environment and baseline setting for each environmental issue area, in accordance with NEPA regulations (40 CFR Part 1502.10) and 14 CCR Section 15125. For the purpose of this document and pursuant to the CEQA Guidelines (Section 15125(a)), the environmental setting is used to determine the impacts associated with the Build Alternative Options and is based on the environmental conditions that existed at the time the NOP was published. The baseline physical conditions, as required under CEQA, are applied similarly under NEPA to establish the affected environment. This approach is used to avoid confusion that might result from using different baselines for CEQA and NEPA purposes.

The information contained in the affected environment section uses data sources described in each resource section. The Tier 1/Program EIS/EIR Study Area was combined with geographic information system (GIS) overlays to identify resources that could be affected by the Program, with resources identified on a broad scale using available mapping information.

For the Western Section, the Tier 1/Program EIS/EIR Study Area extends up to 600 feet from either side of the existing railroad centerline. For the Eastern Section, the Tier 1/Program EIS/EIR Study Area for station-related infrastructure improvements extends up to 1,000 feet from either side of the centerline, plus a 500-foot buffer for the assessment of indirect impacts, for a total Tier 1/Program EIS/EIR Study Area of 1,500 feet from either side of the centerline at each of the individual station location areas. The remaining portion of the Eastern Section Tier 1/Program EIS/EIR Study Area encompasses up to 300 feet from the railroad centerline to include non-station-related infrastructure improvements, plus a 500-foot buffer for the assessment of indirect impacts, for a total Tier 1/Program EIS/EIR Study Area of 800 feet from the railroad centerline.

For purposes of cultural resources analysis, a Tier 1/Program EIS/EIR Cultural Study Area was developed to identify potential archaeological, historic, and tribal resources within the area. For the Western Section, the Tier 1/Program EIS/EIR Cultural Study Area extends up to 600 feet from either side of the existing railroad centerline. For the Eastern Section, the Tier 1/Program EIS/EIR Cultural Study Area extends up to 0.25 mile from either side of the centerline for the entire Eastern Section.

For the purposes of the socioeconomic and community analysis, the Tier 1/Program EIS/EIR Study Area for the socioeconomic evaluation encompasses 0.5 mile centered on the railroad centerline (0.25 mile on either side).

**Environmental Consequences:** Changes that would result from the Build Alternative Options were evaluated relative to the affected environment and existing environmental conditions within the Tier 1/Program EIS/EIR Study Area, as defined for each environmental issue area.

The discussion of environmental consequences is divided into a Western Section and an Eastern Section and further defined to distinguish effects related to construction and operation of the Program. Subheadings are used, where appropriate, to transition between major topics or sub-issues.

Each Build Alternative Option is compared with other Build Alternative Options within the same geographical sections, as well as with the No Build Alternative. The intensity of an effect as a result of the Build Alternative Options are characterized as negligible, moderate, or substantial when compared with the No Build Alternative. For comparative analysis, these terms are defined as follows:

- Negligible-intensity effects from construction and operation of a Build Alternative Option are those that would have no or few effects on resources when compared with existing conditions.
- Moderate-intensity effects from construction and operation of a Build Alternative Option would have a noticeable effect on resources but would not have a substantial adverse permanent effect on resources.
- Substantial-intensity effects would be long term or permanent and would have a noticeable, inevitable effect on resources within the Tier 1/Program EIS/EIR Study Area.

Available information from databases and data sources are used to assess the potential magnitude or intensity of the effects and summarized within this section.

**NEPA Summary of Potential Effects:** This section summarizes NEPA magnitude of effect conclusions for the Build Alternative Options based on the discussion in the environmental consequences section.

**CEQA Summary of Potential Impacts:** For the purposes of this analysis, Appendix G of the CEQA Guidelines serves as the thresholds of significance to evaluate the Program's impacts. This section summarizes CEQA significance conclusions for the Build Alternative Options based on the discussion in the environmental consequences section, proposed programmatic mitigation strategies to reduce, avoid, or minimize the potential impact, and the significance determination after mitigation strategies are applied.

**Avoidance, Minimization, and Mitigation Strategies:** This section identifies proposed programmatic mitigation strategies for further consideration in the Tier 2/Project-level analysis.